IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

In re CASSAVA SCIENCES INC. SECURITIES LITIGATION	§ § §	Master File No. 1:21-cv-00751-DAE
	§	CLASS ACTION
This Document Relates to:	§ §	
ALL ACTIONS	§ § §	

**DEFENDANTS' MOTION TO EXCLUDE THE CLASS CERTIFICATION
TESTIMONY OF DR. STEVEN FEINSTEIN**

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INTRODUCTION

The opinions of Plaintiffs' class certification expert, Dr. Steven Feinstein, have no basis in financial economics, assume the very conclusions Dr. Feinstein purports to prove, fail to engage with relevant facts, and are unreliable in myriad other ways. *See* ECF 148-7 (Feinstein Rpt.); ECF 209-5 (Feinstein Rebuttal). Dr. Feinstein's opinions thus fail to pass muster under *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993), and should be excluded.

Dr. Feinstein's opinions stem from a baseless concept of market efficiency that would essentially result in every market being rubber-stamped "efficient" and every securities class action being certified. Rather than test whether the market's movements are consistent with efficiency, Dr. Feinstein assumes that *any* price movement demonstrates efficiency, ignores any evidence inconsistent with that assumption, and concocts post hoc explanations for wild price swings disconnected from news. Such a strained, one-sided approach to market efficiency has zero basis in financial economics.

Consistent with this flawed approach, Dr. Feinstein fails to engage with the realities of this case. He ignores the meme-stock dynamics that plagued Cassava's stock during the class period, asserting that Cassava was just like any other stock traded on the Nasdaq. Dr. Feinstein's refusal to account for the forces affecting Cassava's stock price during the class period further renders his opinions on market efficiency unreliable and unhelpful to the trier of fact.

On top of all that, Dr. Feinstein's damages opinion is vague, generic, and disconnected from the facts. The market forces impacting Cassava's stock raise obvious challenges to reliably calculating classwide damages, which Dr. Feinstein does *nothing* to address. Indeed, the only connection between his purported damages model and the facts is Dr. Feinstein's own conclusory say-so, which plainly is insufficient under *Daubert*. *See Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

Dr. Feinstein's testimony also makes unsupported assertions about statistical significance and "rational bounds," grossly mischaracterizes the opinions of Defendants' expert, and is fatally flawed in a host of other respects.

With all these flaws, Dr. Feinstein's opinions should be excluded in their entirety.

LEGAL STANDARD

Federal Rule of Evidence 702 assigns to district courts "a gatekeeping role" to "ensur[e] that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." *Daubert*, 509 U.S. at 597. The proponent of expert testimony bears the burden to demonstrate that "(1) the testimony is based on sufficient facts or data; (2) the testimony is the product of reliable principles and methods; and (3) the expert's opinion reflects a reliable application of the principles and methods to the facts of the case." Fed. R. Evid. 702; *see Daubert*, 509 U.S. at 590-97.

Daubert's standard "applies with the same rigor at the class certification stage as at trial." *Georgia Firefighters' Pension Fund v. Anadarko Petroleum Corp.*, 99 F.4th 770, 774 (5th Cir. 2024); *see also Prantil v. Arkema Inc.*, 986 F.3d 570, 575 (5th Cir. 2021) ("[T]he *Daubert* hurdle must be cleared when scientific evidence is relevant to the decision to certify."). To clear the *Daubert* hurdle, expert testimony must be supported by "more than subjective belief or unsupported speculation." *Paz v. Brush Engineered Materials, Inc.*, 555 F.3d 383, 388 (5th Cir. 2009) (citing *Daubert*, 509 U.S. at 590). Rather, testimony "must be reliable at each and every step or else it is inadmissible." *Knight v. Kirby Inland Marine, Inc.*, 482 F.3d 347, 355 (5th Cir. 2007). "The reliability analysis applies to all aspects of an expert's testimony: the methodology, the facts underlying the expert's opinion, [and] the link between the facts and the conclusion." *Id.* (quoting *Heller v. Shaw Indus., Inc.*, 167 F.3d 146, 155 (3d Cir. 1999)). Consistent with this standard, courts must exclude opinions supported "only by the [expert's] *ipse dixit*." *Joiner*, 522 U.S. at 146.

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BACKGROUND

Dr. Feinstein's First Report. Plaintiffs filed their Motion for Class Certification on March 13, 2024, supported by an expert report from Dr. Feinstein. *See* ECF 148. In that report, Dr. Feinstein asserted (i) that the markets for Cassava stocks and options during the proposed class period were "efficient" under *Basic, Inc. v. Levinson*, 485 U.S. 224 (1988), and (ii) that damages could reliably be calculated on a classwide basis under *Comcast Corp. v. Behrend*, 569 U.S. 27, 34 (2013).

To support his market efficiency opinion, Dr. Feinstein relied entirely on a rote analysis of the factors articulated *Cammer v. Bloom*, 711 F. Supp 1264 (D.N.J. 1989) and *Krogman v. Sterritt*, 202 F.R.D. 467, 477 (N.D. Tex. 2001). In that analysis, Dr. Feinstein failed to address (or even mention) how Cassava stock was affected by the "meme stock" phenomenon, which caused significant volatility in Cassava's stock during the class period divorced from value-relevant news. Feinstein Rpt. ¶¶ 77-218; *see also* Ex. B (Feinstein June Tr.) at 26:9-22.[1] In fact, Dr. Feinstein failed to mention, let alone address, *any* of the massive swings in Cassava's price that occurred in the absence of news. Feinstein Rpt. ¶¶ 77-218. He also ignored social media's impact on Cassava's stock, ignored short-selling constraints that affected Cassava stock during the class period, and ignored the unique characteristics of the markets for Cassava options. *Id.*[2]

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[1] All "Ex." references are to the Affidavit of Scott Campbell in Support of Defendants' Motion to Exclude, filed herewith.

[2] Dr. Feinstein conceded that he never considered how frequently Cassava was discussed on social media until just days before his first deposition, months after he completed his original report. Feinstein June Tr. at 26:9-22. Even then, Dr. Feinstein merely asked his research analyst to "google" search, "how frequently Cassava was mentioned on Reddit over the course of the class period." *Id.* at 46:1-5. His analyst reported that Cassava was mentioned a "few hundred times," which is incorrect. *Id.*; *see* Stulz Rpt. Ex. 1. Based solely on that incorrect number, Dr. Feinstein testified that "his analysis was complete and appropriate." Feinstein June Tr. at 32:19-20.

For his purported damages opinion, Dr. Feinstein stated only that he would use the "out of pocket" method to calculate damages. Feinstein Rpt. ¶¶ 219-32. As described by Dr. Feinstein, his proposed "methodology" is "to use…the information set that's available to investors each day of the class period and assess, using all tools available, what would the stock price have been had there been no misrepresentations or omissions." Feinstein June Tr. at 251:20-252:8; *see also* Feinstein Rpt. ¶ 225. Dr. Feinstein did not specify which "tools" he would use in such an analysis, made no attempt to apply his general "methodology" to the facts, and provided no explanation whatsoever about how he could account for the unusual dynamics impacting Cassava's stock during the class period. Feinstein Rpt. ¶¶ 219-32.

Dr. Stulz's Report. Defendants filed their Opposition to Class Certification on June 28, supported by an expert report from Dr. Rene Stulz, explaining the many fundamental flaws in Dr. Feinstein's opinions. *See* ECF 179. Among other things, Dr. Stulz showed that, as with many meme stocks, many of Cassava's price movements could not be explained by new information and thus were inconsistent with market efficiency. Stulz Rpt. ¶¶ 16-19, 60-94. With respect to damages, Dr. Stulz explained how Dr. Feinstein's "methodology" was entirely disconnected from—and in tension with—the circumstances of this case. *Id.* ¶¶ 167-78. Further, Dr. Stulz pointed out that the bulk of the "corrective disclosures" alleged by Plaintiffs were not associated with *any* statistically significant movement in Cassava's price. *Id*. ¶¶ 164-65.

Dr. Feinstein's Rebuttal Report. Plaintiffs filed their Reply in Support of Class Certification on August 23, supported by a rebuttal report from Dr. Feinstein. *See* ECF 214. That rebuttal report—which is nearly double the length of Dr. Feinstein's first report—tries to wave away the meme-stock dynamics that impacted Cassava during the class period.

Attempting to salvage his market efficiency opinion, Dr. Feinstein asserted in his rebuttal that price swings divorced from value-relevant news *are* consistent with his understanding of

efficiency. Feinstein Rebuttal ¶¶ 110-29, 181-85. Despite this assertion, however, Dr. Feinstein also attempted to concoct "economically material" information released on days pointed out in Dr. Stulz's report, despite his earlier characterization of the dates as "non- or lesser-news days." *Id.* ¶¶ 19, 138-75. Dr. Feinstein further argued the meme-stock phenomenon was entirely irrelevant, on the ground that academics have yet to arrive at a single, consensus definition of "meme stock." *Id.* ¶¶ 61-72. In addition, he asserted that Cassava's stock price remained within "rational bounds" during the class period because the stock traded between $6.79 and $135, approximately within the bounds of analysts' price targets, which ranged from $8 to $215. *Id.* ¶¶ 120-26.

Recognizing that the vast majority of the alleged "corrective disclosures" were associated with *no* statistically significant price change, Dr. Feinstein's rebuttal nonetheless asserted that this lack of price movement is irrelevant to any price impact analysis. *Id.* ¶¶ 321-22.

As for damages, Dr. Feinstein's rebuttal merely rehashed the same vague assertions, stating his "methodology" was "fully articulated" in his first report. *Id.* ¶¶ 266-315.

ARGUMENT

I.   Dr. Feinstein's Opinions Rely on an Unsupported and Circular Definition of Market Efficiency

Dr. Feinstein's opinions on market efficiency stem from a fatally flawed, circular definition of "efficiency" that has no basis in financial economics.

"When discussing 'market efficiency' in the context of the *Basic* presumption, courts agree that semi-strong-form efficiency is the relevant form." *In re Teva Sec. Litig.*, 2021 WL 872156, at *7 (D. Conn. Mar. 9, 2021) (collecting cases); *see also, e.g.*, *In re Fed. Home Loan Mortg. Corp. (Freddie Mac) Sec. Litig.*, 281 F.R.D. 174, 177 (S.D.N.Y. Mar. 27, 2012) (same); *In re Enron Corp. Sec.*, 529 F. Supp. 2d 644, 745 (S.D. Tex. 2006) (same). The concept of "semi-strong-form efficiency" is well-established in financial economics, and it is the definition that Defendants'

expert, Dr. Stulz, relied upon. *See* Stulz Rpt. ¶¶ 31-35. In a semi-strong efficient market, the stock price quickly incorporates all new, value-relevant public information. Stulz Rpt. ¶ 31. Accordingly, a pattern of significant price changes disconnected from any new public information is inconsistent with market efficiency. Stulz Rpt. ¶¶ 34-35; *see Krogman v. Sterritt*, 202 F.R.D. 467, 477 (N.D. Tex. 2001).

Despite claiming to apply this well-established standard, Dr. Feinstein in fact relies on his own flawed interpretation of "informational efficiency" to conclude that *any* price movement is consistent with market efficiency. But Dr. Feinstein's theory of "informational efficiency" is circular, practically resulting in *every* market being efficient. In fact, Dr. Feinstein testified that he could not identify a single example of an inefficient market under his approach. *See* Ex. A (Feinstein Sept. Tr.) at 56:15-58:19, 60:22-62:10. Such a toothless approach has zero basis in financial economics or law.

A.   **Dr. Feinstein's Theory of Market Efficiency Is Circular and Results in Every Market Being Deemed Efficient**

In an efficient market, the "market price" of shares should "reflect[] all publicly available information." *Basic*, 485 U.S. at 246. According to Dr. Feinstein, however, "[i]nformational efficiency" only "requires that the stock respond to and impound new information *the market deems to be relevant*." Feinstein Rebuttal ¶ 112 (emphasis added); *see also id.* ¶¶ 181-85 ("efficient stocks may respond to factors other than fundamental cash flow information"). So if the stock price fails to respond to new information, Dr. Feinstein would conclude the market did not deem the information "relevant," regardless of the information's content. Conversely, if the stock price moves following the publication of information, Dr. Feinstein would conclude the market deemed the information "relevant," even if the information was stale or wholly unrelated to value.

Dr. Feinstein thus asserts that *any* price movement following the publication of *any* information shows efficiency—regardless of whether the information was value-relevant, regardless of the direction or magnitude of the price change, and regardless of how long the price continues to swing following the publication. *E.g.*, Feinstein Rebuttal ¶ 16 ("[I]f a market reacts to new information rather than ignores that information, that market is informationally efficient."). In other words, instead of actually testing for market efficiency, Dr. Feinstein *assumes* any price fluctuation is efficient and concocts post hoc explanations to support that assumption.

Indeed, when confronted with examples of Cassava stock's massive swings in the absence of new information, *see* ECF 179 at 11-16, Dr. Feinstein attempted to concoct "economically material information" supposedly released on those dates, despite his earlier description of the dates as "non- or lesser-news days." Feinstein Rebuttal ¶¶ 19, 138-75. As described at length in Defendants' Surreply, Dr. Feinstein's post hoc attempt to explain away these wild price swings fails. *See* ECF 227 at 7-9.

For example, Dr. Feinstein attributes the price increase of more than 34% on September 18, 2020, to the "news of insider buying" after market close on the previous trading day, and he describes this reaction as "an example of Cassava stock trading in an efficient market." *See* Feinstein Rebuttal ¶¶ 141-42. But Dr. Feinstein fails to provide any explanation for why such a price reaction is consistent with market efficiency, and he cannot explain why other Form 4 filings reporting "insider buying" during the class period were not associated with *any* statistically significant stock price movement. *See* Feinstein Sept. Tr. 112:8-112:17, 118:17-119:6. Indeed, Dr. Feinstein admitted he is unaware of *any* examples of other stocks "that moved 20 percent on no news other than the filing of a Form 4." *Id.* 106:2-106:10.[3]

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[3] Dr. Feinstein also repeatedly tries to attribute massive price movements to news released days earlier. *E.g.*, Feinstein Rebuttal ¶¶ 149-50.

Given his "heads-I-win, tails-you-lose" approach to efficiency, it is unsurprising that Dr. Feinstein has never opined that a market was inefficient. *See* Feinstein Sept. Tr. at 56:15-58:19, 60:22-62:10. Indeed, when asked to identify *any* example of market inefficiency, Dr. Feinstein could not do so. *See id.* Even when asked about the infamous Dutch Tulip Mania of the 1630s— *the* classic example of market inefficiency—Dr. Feinstein testified that the Dutch tulip market could have been operating efficiently during that period.[4]

Under Dr. Feinstein's theory, the market is always "right," *no* price movement can ever be inconsistent with efficiency, and *every* market is efficient. His methodology thus is "aimed at achieving one result" and "must be excluded." *Faulkner v. Arista Recs. LLC*, 46 F. Supp. 3d 365, 381 (S.D.N.Y. 2014); *see also In re Zoloft (Sertraline Hydrochloride) Prods. Liab. Litig.*, 858 F.3d 787, 796-800 (3d Cir. 2017) (affirming exclusion of "conclusion-driven" analysis); *In re Mirena Ius Levonorgestrel-Related Prod. Liab. Litig. (No. II)*, 341 F. Supp. 3d 213, 241 (S.D.N.Y. 2018) ("Opinions that assume a conclusion and reverse-engineer a theory to fit that conclusion are…inadmissible." (citations omitted)); *In re Northfield Lab'ys, Inc. Sec. Litig.*, 267 F.R.D. 536, 548 (N.D. Ill. 2010) (rejecting opinion because plaintiffs' expert "made decisions about [the event] study that tend[ed] to skew it towards a conclusion that the market was efficient").

B.   Dr. Feinstein's Theory Has No Basis in Financial Economics

Dr. Feinstein's theory also is not supported by the relevant academic literature. In financial economics, semi-strong market efficiency requires that a stock price *quickly and fully* incorporate all new, value-relevant public information. *See* Stulz Rpt. ¶¶ 31-35; *see also Unger v. Amedisys*

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[4] "I don't know. We'd have to look to see whether information about tulips was impacting the stock—the tulip prices, and we'd have to look at what—what were reasonable valuation models. There was certainly a lot of sentiment where people wanted tulips and were willing to pay for them, and that sentiment changed." Feinstein Sept. Tr. at 80:15-23.

Inc., 401 F.3d 316, 325 (5th Cir. 2005) ("In an efficient market, …material misstatements alter a stock's price almost immediately."); *In re PolyMedica Corp. Sec. Litig.*, 432 F.3d 1, 12 (1st Cir. 2005) ("[A]n 'efficient' market [is] a market in which prices incorporate rapidly or promptly all publicly available information." (citation omitted)); *In re Fed. Home Loan Mortg. Corp. (Freddie Mac) Sec. Litig.*, 281 F.R.D. 174, 182 (S.D.N.Y. Mar. 27, 2012) ("Without evidence of the prompt effect of unexpected news on market price, the market cannot be called efficient.").

Dr. Feinstein rejects this well-established definition. Instead, he asserts that price "reactions" occurring days or even weeks after the publication of news are consistent with market efficiency. *See* Feinstein Rebuttal ¶¶ 19, 138-75. Indeed, when asked how to "determine when a news event stopped having impact on the price" under his "framework for studying market efficiency," Dr. Feinstein provided only the circular response that "one could look at the price," and see "if there's a continued price reaction." *See* Feinstein Sept. Tr. at 126:14-22. Thus, according to Dr. Feinstein, if a stock's price keeps moving, the stock is still "processing" or "reacting" to previous news—*regardless* of how long such price fluctuations continue.

Dr. Feinstein does not cite any academic literature that would support this circular interpretation of "informational efficiency." *See generally* Feinstein Rpt.; Feinstein Rebuttal.

Even more problematic, his own academic writings do not support the approach he is taking as a litigation expert. In a 2021 paper, Dr. Feinstein identified three sources that he claimed define "informational efficiency."[5] None of those three sources support the interpretation Dr. Feinstein attempts to assert here. The first states that "[i]n an efficient market any new information would be immediately and fully reflected in prices" and that "[a]s investors seek to exploit opportunities created by temporary inefficiencies they will cause the inefficiencies to disappear, denying the less

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[5] Ex. C (Villanueva & Feinstein, "Stock Price Reactivity to Earnings Announcements: The Role of the Cammer/Krogman Factors," *Review of Quantitative Finance and Accounting* (2021)) at 204.

alert and/or less informed any chance to obtain abnormal profits."[6] The second defines "information-arbitrage efficiency" as describing a market where it is "impossible to gain from trading on the basis of generally available public information."[7] The third states that a "market is informationally efficient if prices respond *immediately* so that investors cannot make abnormal returns by trading in response to public announcements."[8]

All three of these explanations of market efficiency contradict the interpretation Dr. Feinstein asserts in this case. Under Dr. Feinstein's theory, even if the market reacts in some way to new information today, there is no way to know when or whether the information will ever be *fully* incorporated in the stock price. Investors thus can profit by trading on such stale information, so long as the market "continues to process" that information in subsequent days. Such an understanding of "efficiency" has no basis in financial economics.

C.   Dr. Feinstein's Theory Relies on an Incorrect Legal Standard

Dr. Feinstein asserts that his capacious, one-sided understanding—where *no* price swing can *ever* be inconsistent with efficiency—somehow reflects governing law applying the *Basic* presumption. Feinstein Rpt. ¶¶ 64-65; Feinstein Rebuttal ¶¶ 16, 113; *see* ECF 231 at 10. It does not.

The *Basic* presumption is an exception to the normal rule that reliance is inherently individualized. *Amgen Inc. v. Connecticut Ret. Plans & Tr. Funds*, 568 U.S. 455, 462 (2013) (citing *Basic*, 485 U.S. at 245-47). *Basic*'s underlying premise is that "[i[f a market is generally efficient in incorporating publicly available information into a security's market price," then "it is reasonable to presume that most investors…will rely on the security's market price as an unbiased

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[6] Ex. D (Sharpe, *Investments* (1981)) at 71-72.
[7] Ex. E (Tobin, "On the Efficiency of the Financial System," *Lloyds Bank Annual Review* (1984)).
[8] Ex. F (Cornell & Haut, "How Efficient is Sufficient: Applying the Concept of Market Efficiency in Litigation," *Business Lawyer* (2019)) at 420 (emphasis added).

assessment of the security's value in light of all public information." *Id.* "Thus, courts may presume that investors trading in efficient markets indirectly rely on public, material misrepresentations through their 'reliance on the integrity of the price set by the market.'" *Id.* (quoting *Basic*, 485 U.S. at 245); *see Halliburton Co. v. Erica P. John Fund, Inc.*, 573 U.S. 258, 273 (2014) (same); *see also Greenberg v. Crossroads Sys., Inc.*, 364 F.3d 657, 662 n. 6 (5th Cir. 2004) ("[W]here securities are traded in an efficient market, it is assumed that all public information concerning a company is known to the market and reflected in the market price of the company's stock.").

Under Dr. Feinstein's theory, even price movements in the absence of new information are consistent with market efficiency. Such an understanding directly contradicts *Basic*. If price movements are not *consistently correlated* with the release of value-relevant information, investors have no reason to rely "on the integrity of the price set by the market," and *Basic*'s rationale collapses. *Amgen*, 568 at 462; *see Bell v. Ascendant Sols., Inc.*, 422 F.3d 307, 313-14 (5th Cir. 2005) (explaining that "the hallmark of an efficient capital market" is the extent to which "the current price reflects all available information" (citation omitted)); *Krogman v. Sterritt*, 202 F.R.D. at 477 ("[I]n an efficient market, a stock's price remains relatively stable in the absence of news."). Thus, Dr. Feinstein's theory of efficiency is entirely disconnected from the law.

Because Dr. Feinstein's opinions rely on an incorrect legal standard for market efficiency, they should be excluded on that ground alone. *See, e.g.*, *Lamar Advert. Co. v. Zurich Am. Ins. Co.*, 533 F. Supp. 3d 332, 348 (M.D. La. 2021) (excluding expert opinion based on "incorrect statement of the law"); *Martinez v. Porta*, 601 F. Supp. 2d 865, 866 (N.D. Tex. 2009) (excluding expert opinion "based on an erroneous legal premise"); *see also Nationwide Transp. Fin. v. Cass Info. Sys.*, 523 F.3d 1051, 1059 (9th Cir. 2008) (when expert testimony contains "erroneous statements of law," it is "'not only superfluous but mischievous'"); *Williamson Oil Co. v. Philip Morris*

USA, 346 F.3d 1287, 1322-23 (11th Cir. 2003) (expert's opinions "were of absolutely no use to a factfinder" because they did not reflect "the state of the law"); *Werth v. Makita Elec. Works, Ltd.,* 950 F.2d 643, 650 (10th Cir. 1991) (trial court "properly intercepted" expert's "testimony which was based upon the wrong legal standard").

II.   Dr. Feinstein Ignores Relevant Facts About the Markets for Cassava Stock and Options During the Class Period, Including Glaring Indicators of Inefficiency

In his rush to opine that efficiency is established, Dr. Feinstein ignores important facts about the markets for Cassava's stock and options, including glaring indicators of inefficiency.

"[E]xclusion of proffered testimony is warranted where the expert fails to address evidence that is highly relevant to his or her conclusion." *Daniels-Feasel Forest Pharms., Inc.*, 2021 WL 4037820, at *5 (S.D.N.Y. Sept. 3, 2021), *aff'd sub nom. Daniels-Feasel v. Forest Pharms., Inc.*, 2023 WL 4837521 (2d Cir. July 28, 2023). Because Dr. Feinstein's market efficiency opinions fail to meaningfully address key facts, his opinions are unreliable, unhelpful to the finder of fact, and should be excluded. *See IBEW Loc. 90 Pension Fund v. Deutsche Bank AG*, 2013 WL 5815472, at *15 (S.D.N.Y. Oct. 29, 2013) (rejecting opinion where plaintiffs' expert failed to consider all characteristics of the relevant market); *see Cannon v. BP Prod. N. Am., Inc.*, 2013 WL 5514284, at *6-17 (S.D. Tex. Sept. 30, 2013) (excluding expert testimony that failed to analyze relevant facts and denying class certification as a result). Among other failures, Dr. Feinstein's approach ignores the meme-stock dynamics impacting Cassava's stock during the class period, which resulted in massive price swings disconnected from news.[9]

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[9] Dr. Feinstein also grossly mischaracterizes Dr. Stulz's report. For example, Dr. Feinstein accuses Dr. Stulz of "cherry-picked data mining," criticizing Dr. Stulz for supposedly failing to include the Solactive Roundhill Meme Stock Index in his analysis of Dr. Feinstein's event model. Feinstein Rebuttal ¶ 193. But Dr. Stulz ran the *exact analysis* that Dr. Feinstein asserts he did not, the results of which are plainly presented in Exhibits 3B and 3C of Dr. Stulz's report. *See* Stulz Rpt. Exs. 3B, 3C. Dr. Feinstein's opinions are riddled with such misstatements.

As explained in Defendants' class certification briefing, Cassava's stock demonstrated enormous volatility during the class period, untethered to material information in the market. Combined with market analysts and media's attributing these swings to retail meme-stock traders, these price swings are compelling evidence that the market for the stock should not be presumed "efficient." *See* Stulz Rpt. ¶¶ 16-19; *Bratya SPRL v. Bed Bath & Beyond Corp.*, 2024 WL 4332616 (D.D.C. Sept. 27, 2024) (finding market inefficient due to meme-stock dynamics); *see alsoKrogman*, 202 F.R.D. at 477 (holding that there was "no efficient market where price movements were random and volatile"); *George v. China Auto. Sys., Inc.*, 2013 WL 3357170, at *12 (S.D.N.Y. July 3, 2013) (same).

Yet Dr. Feinstein failed to acknowledge—much less consider—any of these swings in his original analysis. *See* Feinstein Rpt. In concluding the market was efficient, Dr. Feinstein's report relied entirely on a rote analysis of the *Cammer/Krogman* factors, without addressing the actual behavior of Cassava's stock during the class period. Stulz Rpt. ¶¶ 45-50; *see Unger*, 401 F.3d at 325 (noting the *Cammer/Krogman* factors are not a "checklist"); *Bratya SPRL v. Bed Bath & Beyond Corp.*, 2024 WL 4332616 (D.D.C. Sept. 27, 2024) (noting the *Cammer/Krogman* factors are not "a guarantee of market efficiency").

In the same vein, Dr. Feinstein's "collective event study" is unreliable because it fails to account for the many significant movements in Cassava's stock price that occurred in the absence of any new information. Stulz Rpt. ¶¶ 60-94; *see George*, 2013 WL 3357170, at *12; *Freddie Mac*, 281 F.R.D. at 182. As explained in Dr. Stulz's first report, many swings in Cassava's stock price during the class period are better explained by social media activity than by the publication of any value-relevant news. *See* Stulz Rpt. ¶¶ 70-94. Dr. Stulz identified 34 days during the class period that (1) Dr. Feinstein characterizes as "non- or lesser-news days," but (2) on which Cassava received extremely high levels of social-media attention. *Id.* ¶¶ 71-74. Applying the same

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significance metric employed by Dr. Feinstein, the rate at which Cassava's stock price underwent statistically significant changes on these no-news dates is "*indistinguishable*" from the "news" dates Dr. Feinstein identifies. *Id.* ¶ 75 (emphasis added). "This finding suggests that either Cassava's stock price was often moving in the absence of new, value-relevant information, inconsistent with the 'cause-and-effect' relationship Dr. Feinstein attempts to establish, or that the construction of Dr. Feinstein's 'collective events study' is deficient and flawed, or both." *Id.* ¶ 19.

When confronted with these fatal flaws, Dr. Feinstein obfuscated and attempted to assert that Cassava's massive volatility in the absence of news somehow was irrelevant to market efficiency. *See* Feinstein Rebuttal ¶¶ 110-29, 181-85. As discussed above, such assertions stem from a circular and fatally flawed conception of "efficiency" that should be rejected.

Moreover, as explained above and in Defendants' Surreply, Dr. Feinstein's attempts to concoct "economically material" information released on the days referenced in Dr. Stulz's report fail. Indeed, Dr. Feinstein simply asserts that certain massive price movements were due to "random chance," without engaging in any analysis of whether social media activity or other meme-stock dynamics caused or contributed to such swings. *Id.* ¶¶ 152, 165-66.

In short, rather than engage with the meme-stock dynamics central to this case, Dr. Feinstein attempts to sidestep them altogether. His refusal to account for the unusual forces impacting Cassava's stock during the class period further renders his opinions unreliable, unhelpful, and excludable. *E.g.*, *Daniels-Feasel*, 2021 WL 4037820, at *5; *IBEW*, 2013 WL 5815472, at *15; *Cannon*, 2013 WL 5514284, at *6-17.

III.   Dr. Feinstein's Purported Evaluation of "Rational Bounds" Is Unreliable

Straining to argue that Cassava's market was efficient in the face of Cassava's wild price swings, Dr. Feinstein asserts that Cassava's stock price remained within "rational bounds" because the stock traded roughly within analysts' price targets, which ranged from $8 to $215 during the

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class period. Feinstein Rebuttal ¶¶ 120-26. Dr. Feinstein thus suggests that virtually *any* movement in Cassava's price should be considered "rational," regardless of its relation to new information, so long as the price remained between $8 and $215.

Dr. Feinstein's astonishing concept of "rational" price movements leads to absurd results. For example, if Cassava's stock jumped from $10 to $200 in one day (an increase of nearly 2,000%) without any new, value-relevant public information on that day, such a price movement would be "rational" under Dr. Feinstein's rubric. Similarly, if the price moved from $10 to $200 on one day following new information, but then fell back to $10 the next day without further new information, Dr. Feinstein still would consider those movements "rational" and consistent with market efficiency.

Dr. Feinstein's assertions about "rational bounds" are an unreliable, last-ditch attempt to salvage his obviously deficient market efficiency opinions. They should be excluded.

IV.   Dr. Feinstein's Claims About Statistical Significance Are Circular and Unreliable

Dr. Feinstein cannot dispute that the bulk of the "corrective disclosures" alleged by Plaintiffs were not associated with *any* statistically significant change in Cassava's price. *See* Feinstein Rebuttal ¶¶ 321-22. Instead, he asserts this somehow is irrelevant to price impact. *Id.* ¶ 321. Dr. Feinstein concedes that "[i]f a price movement is not statistically significant, one cannot rule out random volatility," but claims that "neither can one rule out that company information (a misrepresentation, omission, or a corrective disclosure) was the cause of the price movement or at least a contributing factor." *Id.* ¶ 322.

This is yet another example of Dr. Feinstein's "heads-I-win, tails you-lose" approach, in which he interprets his "tests" as being favorable to Plaintiffs *regardless* of the test's results. According to Dr. Feinstein, statistically significant price movements show price impact, but the *lack* of such movement has *no bearing* on price impact. This makes no sense. *See In re Kirkland*

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Lake Gold Ltd. Sec. Litig., 2024 WL 1342800, at *10 (S.D.N.Y. Mar. 29, 2024) (criticizing Dr. Feinstein's position on statistical significance). Indeed, Dr. Feinstein's interpretation of statistical significance would *never* lead to the conclusion that a disclosure had no price impact.

In financial economics, statistical significance is how one tests for whether information affected a stock's price. On dates not associated with statistically significant returns, there is no basis to conclude that any residual price movement cannot be fully attributed to random variation. *See Bratya*, 2024 WL 4332616, at *20 (noting the lack of a statistically significant price reaction meant there was "no evidence" that misrepresentation impacted stock price). Thus, the lack of statistically significant price movements on alleged "corrective disclosure" dates plainly is relevant to demonstrating price impact. *In re Apache Corp. Sec. Litig.*, 2024 WL 532315, at *11 (S.D. Tex. Feb. 9, 2024) (noting that lack of statistically significant price declines was a "relevant fact to consider alongside Defendants' other evidence concerning price impact"). Dr. Feinstein's assertion to the contrary is unreliable, contrary to basic principles of financial economics, and should be excluded.

V.   Dr. Feinstein's Black-Box Damages Opinion is Vague, Indefinite, and Unverifiable

Dr. Feinstein's purported damages opinion fails to engage in any analysis whatsoever to show how classwide damages could reliably be calculated in this case.

Any "model purporting to serve as evidence of damages in [a] class action must measure only those damages attributable to [the plaintiffs'] theory" of liability. *Comcast*, 569 U.S. at 34. "If the model does not even attempt to do that, it cannot possibly establish that damages are susceptible of measurement across the entire class for purposes of Rule 23(b)(3)." *Id.* "Following *Comcast,* circuit and district courts have rigorously examined proposed damages methodologies in putative class action cases for disconnects between damages and liability." *In re BP p.l.c. Sec. Litig.*, 2013 WL 6388408, at *17 (S.D. Tex. Dec. 6, 2013) (collecting cases). "Plaintiffs cannot

avoid this hard look by refusing to provide the specifics of their proposed methodology" at the class certification stage. *Id.*

Avoiding scrutiny by refusing to provide any specifics about his proposed methodology is precisely what Dr. Feinstein tries to do here. Dr. Feinstein's purported "out-of-pocket" damages model "is vague, indefinite, and unspecific, [and] simply asserts" that "there are unspecified 'tools' available to measure damages" without providing any details whatsoever for how those "tools" will be used to measure damages in this case. *Ohio Pub. Emps. Ret. Sys. v. Fed. Home Loan Mortg. Corp.*, 2018 WL 3861840, at *19 (N.D. Ohio Aug. 14, 2018) (granting motion to exclude Dr. Feinstein's testimony). In fact, the *only* thing in Dr. Feinstein's proposed damages model that is specific to this case is his conclusory statement that his methodology is "consistent in this case with these Plaintiffs' theory of liability." Feinstein June Tr. at 237:7-14; 238:16-20.

Dr. Feinstein has tried this before and had his opinions rejected as a result. *E.g.*, *Ohio Pub. Emps. Ret. Sys.*, 2018 WL 3861840, at *19. For example, in *Sicav v. James Jun Wang*, 2015 WL 268855 (S.D.N.Y. Jan. 21, 2015), the court concluded Dr. Feinstein failed to adequately explain how damages could be proven, specifically criticizing Dr. Feinstein's failure to engage with the facts of the case. *Id.* at *3-4, 5-6. Similarly, the court in *In re Vale S.A. Sec. Litig.*, 2022 WL 122593, *6 (E.D.N.Y. Jan. 11, 2022), rejected Dr. Feinstein's damages opinion as "black box-like, unverifiable, standardless, and subjective."

As these courts recognized, Dr. Feinstein's proposed damages "methodology" amounts to nothing more than: "trust me, I'm an expert." That plainly is insufficient under *Daubert*. *E.g.*, *Joiner*, 522 U.S. at 146; *In re Vale S.A. Sec. Litig.*, 2022 WL 122593, at *12. Indeed, "nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." *Chan v. Coggins*, 294 F. App'x 934, 938-39 (5th Cir. 2008) (quoting *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 157

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(1999)); *see also Fort Worth Emps.' Ret. Fund v. J.P. Morgan Chase & Co.*, 301 F.R.D. 116, 142 (S.D.N.Y. 2014) ("without assurance beyond [plaintiffs' expert]'s say-so, the Court cannot conclude that there is a damages model that will permit the calculation of damages on a classwide basis"); *In re BP p.l.c. Sec. Litig.*, No. 10-md-2185, ECF 857 at 23 (S.D. Tex. May 20, 2014) ("The Court is left…with a conclusory assertion that damages will be calculated on a classwide basis. Plaintiffs bear the burden of proving all relevant elements of Rule 23. That burden is not met by asking the Court simply to trust them.").

As explained in Defendants' class certification briefing, the problems with Dr. Feinstein's failure to present a model for calculating classwide damages are especially pronounced on the unusual facts of this case. Given Cassava's massive volatility, including during the period in which Cassava was labeled a meme stock, Dr. Feinstein has not established that residual price declines on alleged corrective disclosure dates reliably can be used to measure damages. *See* Stulz Rpt. ¶¶ 196, 204; *see* ECF 227 at 17-18.

For example, Dr. Feinstein's generic discussion of damages fails to explain how, when estimating inflation, he will account for the absence of statistically significant price drops associated with the vast majority of Plaintiffs' alleged corrective disclosures. *See* Stulz Rpt. ¶ 167. On dates without statistically significant price declines, there is no basis to conclude that declines were not caused by random variation in the stock price. *See id.* ¶¶ 24, 159, 167. Thus, if the market for Cassava's stock were efficient, as Dr. Feinstein claims, he has not shown how it is possible to use corrective disclosures that lack statistically significant price changes to estimate the removal of inflation. *See id.* ¶¶ 160, 167.

Further, even for dates *with* statistically significant price changes, Dr. Feinstein does not explain how he can determine the degree to which price declines were due to corrective information rather than other forces. *See id.* ¶¶ 187-200. Dr. Feinstein's "model" depends on

estimating price declines attributable *only* to the correction of the alleged fraud. But he does not explain how he will do that here, where the meme-stock phenomenon drove massive volatility in Cassava's stock during the class period. *See id.*

Dr. Feinstein also does not explain how he can account for changes over the class period in what Cassava could have disclosed. To calculate damages as inflation at purchase less inflation at sale (the "out-of-pocket" method he describes), Dr. Feinstein would need to measure inflation on *each day* of the class period. But the meme-stock phenomenon's impact on Cassava's stock clashes with Dr. Feinstein's plan to work "chronologically backwards" using price declines on alleged corrective disclosure days. Feinstein Rpt. ¶ 230. In fact, it leads to absurd results. Cassava's stock price increased precipitously in 2021, and then experienced similarly precipitous price declines in late summer 2021 that Plaintiffs attribute to corrective disclosures. If those summer 2021 dates are used to measure damages, as Dr. Feinstein contemplates, his method suggests that Cassava's stock price must have been *negative* for much of the first year of the class period, but for the alleged misrepresentations. *See* Stulz Rpt. ¶¶ 28, 172, 203.

Dr. Feinstein does not attempt to grapple with any of these issues or offer anything more than a boilerplate summary of a collection of vaguely described "valuation tools." Nor does Dr. Feinstein specify which of these "valuation tools" he may or may not deploy. Though Dr. Feinstein testified that his methodology reflects "an understanding of the Plaintiffs' theory of liability," Feinstein June Tr. at 237:7-14; 238:16-20, his description of his damage "methodology" is generic, cookie-cutter, and fails to explain how he would tailor his approach to the specific features of this case. Indeed, Dr. Feinstein appears to assert that in *every case*, regardless of the facts or theory of liability, all the expert need do is vaguely reference general "valuation tools" that can, *depending on the facts*, be used to calculated "out-of-pocket" damages. Feinstein June Tr. 239:4-18 (testifying that for "10b5 claims" the out-of-pocket damages model he proposes is "always" appropriate).

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Dr. Feinstein attempts to justify his position by contending that the out-of-pocket "model" is "standard," and that other proposed classes have been certified based upon it in the past. *E.g.*, Feinstein June Tr. at 239:4-18 ("I mean, it's a commonly used methodology."). But an "expert's assurances that he has utilized generally accepted [principles] is insufficient." *Brown v. Ill. Cent. R.R. Co.*, 705 F.3d 531, 536 (5th Cir. 2013) (citation omitted) (affirming exclusion of expert testimony). More is required. *See, e.g.*, *Stevens v. Ford Motor Co.*, 2022 WL 19978265, at *10 (S.D. Tex. Sept. 29, 2022) (excluding expert testimony where expert failed to show how proposed methodology would apply to the facts of the case); *Sicav*, 2015 WL 268855, at *4-5 (rejecting Dr. Feinstein's damages opinion because it failed "to undertake a close analysis, or indeed any analysis" to show that "common proof *in this case*" could establish classwide damages).

In sum, Dr. Feinstein has provided *no information whatsoever* that could allow the Court to determine whether classwide damages reliably can be calculated here. Dr. Feinstein's "vague and generic references to the standard tools of financial economics and calculating inflation by 'working chronologically backwards from the final corrective disclosure' do not represent a methodology that a financial economist could implement to reliably measure damages in a manner consistent with Plaintiffs' theory of liability." Stulz Rpt. ¶ 178. Accordingly, Dr. Feinstein's purported damages opinion is unreliable and should be excluded. *See Cannon*, 2013 WL 5514284, at *12 (excluding damages opinion as unreliable despite plaintiffs "assur[ing] the Court that they can fix the model at the merits stage if needed").

CONCLUSION

For these reasons, the proffered expert testimony of Dr. Steven Feinstein should be excluded under Federal Rule of Evidence 702.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that on November 27, 2024, a true and correct copy of the foregoing was served electronically upon each attorney of record.

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